

The following table shows the highest and lowest temperatures of water observed at the several stations; the monthly ranges of water temperature; the average depth at which the observations were made; and the mean temperature of the air:

Temperature of water for February, 1886.

Station.	Temperature at bottom.		Range.	Average depth, feet and tenths.	Mean temperature of the air at station.
	Max.	Min.			
Atlantic City, New Jersey	36.3	27.9	8.4	6.9	29.9
Alpena, Michigan*	36.3	27.9	8.4	6.9	29.9
Augusta, Georgia	59.7	40.2	10.5	9.4	44.7
Baltimore, Maryland	36.9	31.6	5.3	9.8	31.3
Block Island, Rhode Island	37.0	28.3	8.7	8.1	28.4
Boston, Massachusetts	35.0	29.2	5.8	20.8	26.6
Buffalo, New York*	61.5	45.9	15.6	7.6	54.0
Cedar Keys, Florida	50.8	44.5	6.3	38.3	47.6
Charleston, South Carolina	33.6	32.5	1.1	8.0	28.1
Chicago, Illinois*	43.2	29.8	13.4	2.3	33.6
Chincoteague, Virginia*	34.9	32.3	2.6	14.0	25.4
Cleveland, Ohio*	37.1	31.5	5.6	17.1	20.9
Detroit, Michigan*	37.1	31.5	5.6	17.1	20.9
Duluth, Minnesota*	37.1	31.5	5.6	17.1	20.9
Eastport, Maine	37.1	31.5	5.6	17.1	20.9
Escanaba, Michigan*	37.1	31.5	5.6	17.1	20.9
Galveston, Texas	57.3	46.0	11.3	12.2	53.5
Grand Haven, Michigan*	32.6	32.1	0.5	19.0	23.1
Indianola, Texas	62.5	42.6	19.9	7.8	55.9
Jacksonville, Florida	58.6	50.0	8.6	18.0	53.5
Key West, Florida	76.7	62.2	4.5	17.7	66.0
Mackinaw City, Michigan*	53.8	37.0	16.8	10.6	42.9
Macon, Fort, North Carolina	53.8	37.0	16.8	10.6	42.9
Marquette, Michigan*	53.8	37.0	16.8	10.6	42.9
Milwaukee, Wisconsin*	53.8	37.0	16.8	10.6	42.9
Mobile, Alabama	50.9	44.0	6.7	16.2	49.7
New Haven, Connecticut	35.0	30.3	4.7	16.1	26.1
New London, Connecticut	35.5	31.2	4.3	12.1	27.8
New York City	33.9	30.5	3.4	17.4	28.5
Norfolk, Virginia	43.3	32.6	10.7	16.2	37.7
Pensacola, Florida	57.8	50.2	7.6	16.7	51.2
Portland, Maine	34.6	29.5	5.1	16.8	21.5
Portland, Oregon	46.4	43.0	3.4	56.5	44.7
Sandusky, Ohio*	35.9	29.0	6.9	5.5	28.8
Sandy Hook, New Jersey	35.9	29.0	6.9	5.5	28.8
San Francisco, California	57.6	54.7	2.9	39.1	55.8
Savannah, Georgia	51.1	41.0	10.1	10.1	50.6
Smithville, North Carolina	53.8	35.0	18.8	10.8	43.7
Toledo, Ohio*	53.8	35.0	18.8	10.8	43.7
Wilmington, North Carolina	53.8	35.0	18.8	10.8	43.7

* Observations interrupted by ice; see text.

WINDS.

The most frequent directions of the wind during February, 1886, are shown on chart ii by the arrows flying with the wind; they are also given in the tables of miscellaneous meteorological data. In the upper Mississippi and Missouri valleys, New England, and the middle Atlantic states, the prevailing winds were mostly from the northwest; in the Lake region and Ohio Valley they were from south to southwest; in Washington Territory they were from south and southwest; in California from northeast to northwest; in other districts they were variable.

HIGH WINDS.

[In miles per hour.]

Mount Washington, New Hampshire: the eight-hour movement of the wind from 3 to 11 p. m. of the 26th was 925 miles, being at the rate of 115.6 miles per hour, and largely in excess of any previous eight-hour movement ever recorded at this station. The total movement of the wind for the twenty-four hours ending 3 p. m. of the 27th was 2,673 miles, being 533 miles in excess of any previous twenty-four hour movement. During the night of the 26-27th the terrific hurricane caused the building to rock and tremble; huge masses of frost-work were dashed against the station building with reports as loud as the discharge of cannon.

Wind-velocities of fifty or more miles per hour were recorded during the month, as follows:

Mount Washington, New Hampshire, 75, ne., 2d; 63, nw., 3d; 85, nw., 5th; 74, nw., 6th; 82, nw., 8th; 78, nw., 9th; 62, se., 11th; 94, s., 12th; 94, sw., 13th; 68, nw., 14th; 66, nw., 18th; 74, nw., 19th; 78, nw., 20th; 96, nw., 21st; 60, nw., 22d; 70, nw., 23d; 84, nw., 24th; 94, se., 25th; 138, nw., 26th; 131, nw., 27th.

Pike's Peak, Colorado, 54, n., 3d; 76, w., 8th; 60, ne., 9th;

72, w. 12th; 62, w., 13th; 51, n., 15th; 53, nw., 17th; 64, nw., 18th; 51, w., 20th.

Cape Mendocino, California, 62, se., 4th; 72, se., 5th; 75, se., 6th; 52, se., 22d.

Sandy Hook, New Jersey, 55, ne., 11th; 56, nw., 20th; 62, nw., 26th; 72, nw., 27th.

Fort Canby, Washington Territory, 64, sw., 6th; 52, sw., 7th; 50, s., 11th.

Fort Maginnis, Montana, 60, w., 11th; 78, nw., 13th.

Valentine, Nebraska, 75, nw., 18th; 52, nw., 24th.

Chincoteague, Virginia, 52, nw., 20th; 61, nw., 26th.

New York City, 64, nw., 26th; 56, nw., 27th.

Block Island, Rhode Island, 54, n., 4th.

Cape Henry, Virginia, 52, n., 4th.

Tatoosh Island, Washington Territory, 56., se., 8th.

Fort Shaw, Montana, 52, sw., 11th.

Fort Assinaboine, Montana, 55 w., 11th.

Fort Benton, Montana, 58, sw., 11th.

Rochester, New York, 54, w., 13th.

Fort Totten, Dakota, 56, nw., 24th.

Buffalo, New York, 57, w., 25th.

Sandusky, Ohio, 51, nw., 26th.

LOCAL STORMS.

Little Rock, Arkansas: a severe thunder-storm, moving from southwest to northeast and accompanied by heavy rain, occurred at 11.10 p. m. of the 9th; the lightning, which was intense, struck a dwelling and damaged it to the amount of \$250.

NAVIGATION.

In the following table are shown the danger-points at the various river stations; the highest and lowest depths for February, 1886, with the dates of occurrence, and the monthly ranges:

Heights of rivers above low-water mark, February, 1886.

[Expressed in feet and tenths.]

Stations.	Danger-point on gauge.	Highest water.		Lowest water.		Monthly range.
		Date.	Height.	Date.	Height.	
<i>Red River:</i>						
Shreveport, Louisiana	29.9	12	16.1	25	11.4	4.7
<i>Arkansas River:</i>						
Fort Smith, Arkansas	22.0	14	14.9	1	3.2	11.7
Little Rock, Arkansas*	23.0	15	15.8	8	4.3	11.5
<i>Missouri River:</i>						
Yankton, Dakota*	24.0					
Omaha, Nebraska*	18.0					
Leavenworth, Kansas	20.0	28	8.4	22	6.9	1.5
<i>Mississippi River:</i>						
Saint Paul, Minnesota*	14.5					
La Crosse, Wisconsin*	24.0					
Dubuque, Iowa*	16.0					
Davenport, Iowa*	15.0					
Keokuk, Iowa*	14.0	24, 25	14.7	23	13.0	1.7
Saint Louis, Missouri	32.0	13	23.1	22	13.9	9.2
Caico, Illinois	40.0	21, 22	38.5	10	20.7	17.8
Memphis, Tennessee	34.0	25, 26	29.6	12	14.8	14.8
Vicksburg, Mississippi	41.0	28	37.7	15	23.7	14.0
New Orleans, Louisiana	13.0	28	12.1	17, 18	8.0	4.1
<i>Ohio River:</i>						
Pittsburg, Pennsylvania	22.0	14	19.5	7	3.0	16.5
Cincinnati, Ohio	50.0	17	40.1	10	14.1	26.0
Louisville, Kentucky	25.0	19	15.4	11	7.2	8.2
<i>Cumberland River:</i>						
Nashville, Tennessee	40.0	17	35.2	8, 9	8.7	26.5
<i>Tennessee River:</i>						
Knoxville, Tennessee		1, 19	4.2	11	1.8	2.4
Chattanooga, Tennessee	33.0	14	13.1	10	5.5	7.6
<i>Monongahela River:</i>						
Pittsburg, Pennsylvania	29.0	14	19.5	7	3.0	16.5
<i>Savannah River:</i>						
Augusta, Georgia	32.0	5	11.5	25	8.2	3.3
<i>Mobile River:</i>						
Mobile, Alabama		11, 14	17.3	20	15.3	2.0
<i>Sacramento River:</i>						
Rod Bluff, California		1	9.6	26	2.7	6.9
Sacramento, California		1	25.0	28	19.8	5.2
<i>Willamette River:</i>						
Portland, Oregon		4	17.1	28	4.3	12.8
<i>Colorado River:</i>						
Yuma, Arizona		1	16.4	23 to 28	15.3	1.4

* Observations interrupted by ice; see text.

STAGE OF WATER IN RIVERS.

The Mississippi River was frozen throughout the month at all stations north of Keokuk, Iowa; at Keokuk an ice dam in the river caused the water to rise 0.7 feet above the danger-line on the 24th and 25th.